PORTABLE BRUSH CUTTER RURIS 425/435

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Introduction

- Thank you for choosing the RURIS product andwelcome to our client group.
- We are confident that you will be satisfied with our product for its performance and easy operating mode.
- Our experience in the field and the use of high quality materials led to the manufacture of efficient products that will meet your demands for many years if you follow the recommendations for use and maintenance.
- This user manual will disclose all the necessary information about the operating mode of this product, its construction, technical characteristics and maintenance mode.

The Ruris portable brush cutters are manufactured in Romania and specifically produced for the operation mode, and all kinds of herbs and shrubs that are found on the surface of Romania.

At the same time we have also developed the control system of double adjustment handles(handles with the settings back and forth independent of each other)depending of the operator's way of mowing and the angle of inclination of the slope from different alpine areas.

The RurisPortable Brush Cutters are easy to use and with an easy maintenance thus allowing you to enjoy an assisted operation during use.

The cutting discs feature double edge disc blades to ensure an efficient mowing in both directions, to the left or to the right.

1.0 Essential Checks before Commissioning and During Operation

Make sure that:

1. The circuit of the emergency stop lever is properly assembled.
2. Oil quantity from the engine bath for the brush cutter 425: 100ml
3. Oil quantity from the engine bath for the brush cutter 435: 120ml
4. The oil used is Ruris brand: Ruris 4T/ 10W30-APISJ/CH
5. Running in must be made at idle and not under load. Three tanks of gas at idle, no-load.
6. The reduction gear of the mowing head is filled with graphite grease, the indicated level is given by the grease located on the top of the screw from the supply area according to the installation mode shown below according to figure 1.

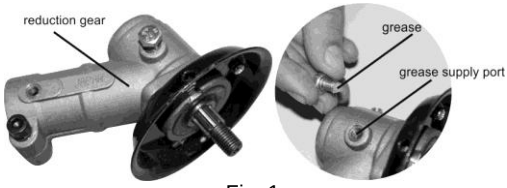

Fig. 1

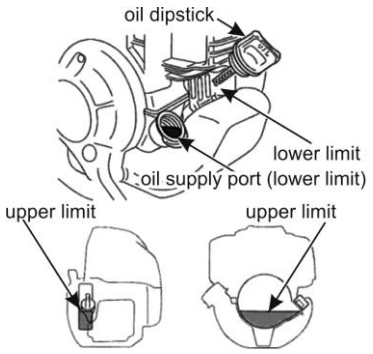

Fig. 1.1

7. The coupling, decoupling levers are working and respond to commands by gently pulling the starter rope.

8. Mounting of the cutter disc is properly made according to the figure below - fig. 1.2

Attention! When you mount the cutter disc, use the lock to unfasten the clamp nut and the retainer clockwise. After mounting the cutting disc make sure that the nut is properly tightened and the cutting disc is securely attached and there is not any warping or cracking on the surface of the cutting disc.

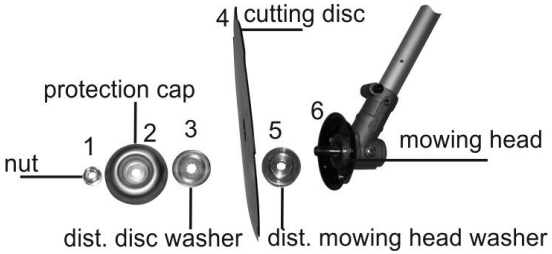

Fig. 1.2

9. Operating the mowing head is made by operating the throttle lever at maximum.
10. Fill with graphite grease the mowing head, with around 20 grams.
11. Check if the protective case of the cutting disc is properly installed.
12. Fuel the brushcutter with gas.

1.1 Labor Protection

Warnings:

European standards CE

Danger!

Read the user manual

Use helmets

Do not use the brush cutter at a distance of less than 15 m near other people

Use protection gloves

Use protective boots or shoes

Risk of injury of the people located near the brush cutter

1.2 Composition of the Ruris Portable Brush Cutter

The portable brush cutter Ruris 425/435 consists of the following elements:

1. engine
2. handle
3. protection case
4. starter roll
5. cutting disc
6. throttle handle
7. switch on/off command
8. mowing head
9. electrical wiring
10. air filter cover
11. exhaust muffler
12. set point of the handles
13. handlebar chassis
14. dual balance harness

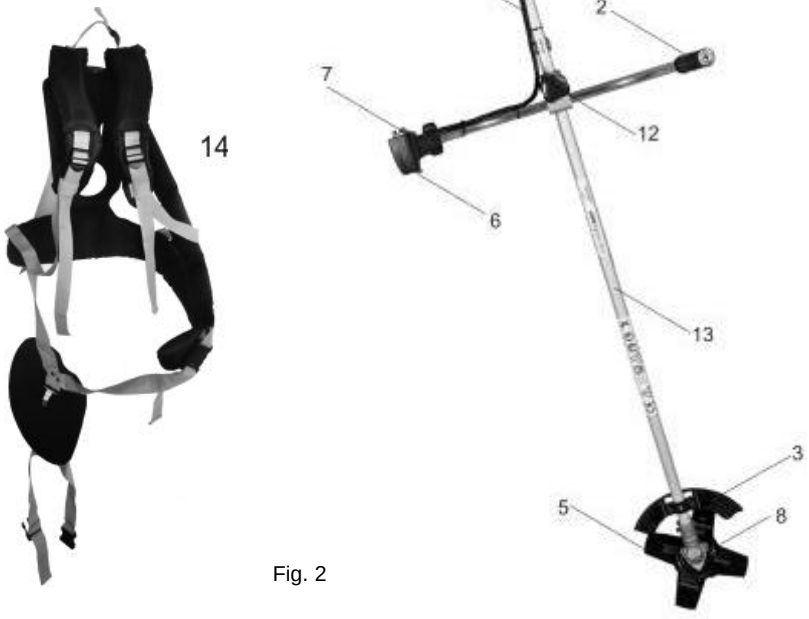

Fig. 2

1.3 Technical Characteristics

Product	Brush cutter 425	Brush cutter 435
Engine manufacturer	Honda	Honda
Country of origin of the engine	Japan	Japan
Engine horsepower (HP)	1	1.3
Cubic capacity (cm³)	25	35.8
Engine duty cycle (stroke)	4	4
Ignition coil	electronic	electronic
Startup	manual	manual
Fuel	Unleaded gasoline	Unleaded gasoline
Engine oil bath capacity (ml)	100	120
Fuel tank capacity (ml)	530	630
Fuel consumption (l/h)	0.54	0.71
Transmission Manufacturer	Ruris	Ruris
Harness **Dual Balance**	double	double
Chassis Guide	Aluminum	Aluminum
Vibrations right handle (m/s²)	2.36	2.39
Vibrations right handle (m/s²)	2.37	2.40
Cutting diameter (mm)	200	200
Cutting midrange for a single crossing (mm)	2100	2100
Standard equipment	4 blades knife	4 blades knife
Drive shaft flexible/rigid	rigid	rigid
Noise level (dB(A))	86	96
Noise emissions (LwA, dB(A))	85	89
Weight	6,9	7,6
Product and engine warranty, months	24	24

Warning!

The Ruris brush cutters are not delivered with gas or oil in the engine unit. Before commissioning, check that commissioning is made according to the manual instructions.

1.4 Installing the Ruris 425/435 brush cutter

Before installing and commissioning, you should make sure that the Ruris Brush Cutter is properly assembled according to the plan of composition of point 1.2 and respect the instructions from this manual. Only then can you proceed to the actual commissioning.

Installation

1.4.1 Throttle lever

Install the throttle lever on the right handle, according to fig.3The plastic handle placed in the aluminum handle guide and then fasten the plastic handle using the crossing screw.

Fig. 3

After fastening the handle, tighten the screw on the base of the throttle support to ensure that during operation it will not come off.

Perform 2-3 operation maneuvers of the throttle lever and check if the cable slides from the minimum to the maximum race of the throttle lever fixed on the engine fig 4.

Fig. 4

Also check the on off switch

NOTE: Do not attempt at cancelling or blocking the emergency stop lever because you risk injuring the people located near you or putting your life in danger.

1.4.2. Handle assembly

Loosen the screw located on the chassis guide by unfastening it until it is free from the thread, according to fig. 5

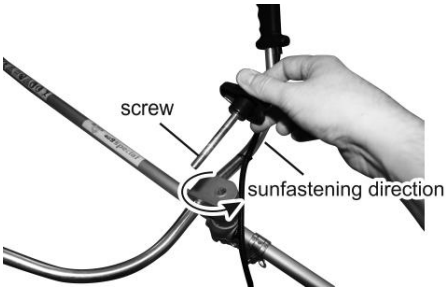

Fig. 5

Bring closer the two handles and place them face to face oriented ahead according to fig 6.

Fig. 6

Gently tighten the fixing screw of the handles and orient them on a neutral position, fig 7.

Fig. 7

1.4.3 Cutting disc installation

In order to install the cutting disc you will first need to unfasten the safety nut. To do this properly you will need the following tools: the lock and the lever key supplied with the brush cutter.

- Use the lock supplied with the Ruris brush cutter and place it in the locking hole from fig 8.

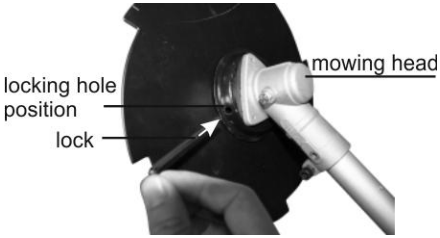

Fig. 8

Use the key supplied with the Ruris brush cutter, secure the safety nut and rotate clockwise to unfasten according to fig 9

Fig. 9

Move outside the shaft the plain washer and the fixing cover fig 10
Place once again the washer on the surface of the mowing head
Place the cutting disc with the Ruris marking towards the mowing head.

Place correctly the protection cap and assemble the nut on the screw shaft by tightening it counter clockwise in order to ensure the cutting disc according to fig 10.

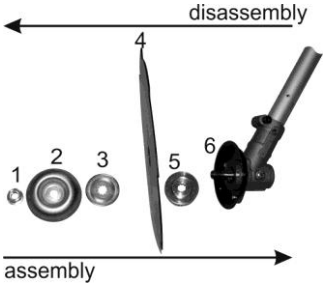

Fig. 10

Check that all the assembly is correctly assembled and that the disc is tightly fastened without axial or transversal play.

If you fail to do this, you must immediately go to the nearest authorized Ruris Service point to remedy this problem.

1.4.4 Assembling the mowing head protection

Assemble the mowing head protection in the attachment points indicated on the chassis guide.

Attention! Do not use the Ruris brush cutter without this protection. To assemble the AutoCut mowing head with thread make sure that the knife is correctly assembled with the active cutting part in the reverse cutting direction of the AutoCut.

1.4.5 Assembling the harness

To assemble the harness you will need to place it on your shoulders and then fix it according to figure 11.

Fig. 11

In order to place correctly the brush cutter into the harness, make sure that it stays balanced and does not touch the ground.

At the same time, the mounting strap where the brush cutter is set is correctly placed, according to figure 12

To balance the brush cutter in relation to the harness and the user's height, you will need to perform the following maneuvers:

- make sure that the mounting strap is located at a hand breadth under the user's hip
- Place the brush cutter in the harness' safety and release it
- If the brush cutter does not stay balanced and touch with the cutting disc the ground surface or if the brush cutter tends to be inclined from the engine, you will need to reposition the securing system placed on the brush cutter guide towards the engine or the cutting disc until you find the state point of the brush cutter, according to Fig. 12

In this case operation will be made with ease without supporting the brush cutter in hands.

Fig. 12

2.0 Commissioning

Before commissioning the Ruris brush cutter you should make sure that the following conditions are fulfilled:

- Within a radius of 5 meters on both sides of the Ruris brush cutter, there are no people or objects with which it could come into contact;
- The brush cutter is placed horizontally on the ground;
- The cables are properly fixed, respond to commands by the checks made, without starting the engine;
- The handles are properly installed and fixed;
- The reduction gear has graphite grease on the screw;
- The engine oil has reached an adequate level, the level is indicated at the first course of thread, outward. See figure
- The engine has a minimum of 200 ml petrol in the tank;
- The throttle handle is placed on the running position to maximum and is locked in this position according to fig.11;
- The on/off switch is placed on the "on" position according to fig.14
- The cutting disc is properly installed and fixed, secured with the safety nut;
- All the screws of the brush cutter are tightened accordingly.

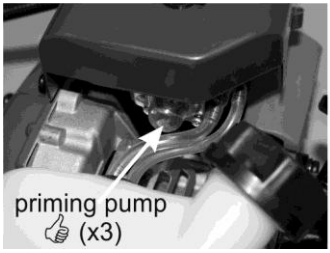

Fig. 13

2.1 Engine startup

Place the brush cutter horizontally on the ground
Prime the carburetor with petrol by 3 successive presses of the petrol pump
The throttle handle and the switch are correctly placed for startup
Place the air flap in the "open" position according to fig. 13

- Fully push the throttle lever (Fig. 14.1)
- Push the block button (Fig. 14.2)

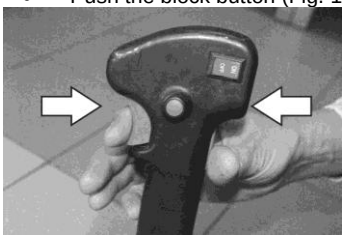

Fig. 14.1

Fig. 14.2

- Switch the switcher on "Start" position

Fig. 14.3

- Release the throttle lever
- With your left hand, strongly grab the shaft tube of the brush cutter and with your right hand, hardly pull the starting rope.

Secure tightly the guide of the brush cutter with your left hand and boldly pull the starter rope with your right hand.

Pulling the rope must be made in two steps. The first step will be made by an easy pull of the starter until the rope has come out of the starter roll about 150-200mm and you can fill the engine compression. The second step will be pulling powerfully and greatly without interruption (pull the starter rope until the level of your shoulders) according to fig.15
Pulling is carried out until the engine starts. After which you gently switch the air flap on the 'open' position according to figure 13, until the engine runs properly.
In order for the engine to work at idle, operate by gripping the throttle lever.

ATTENTION! Do not be brusque when pulling the starter because you risk damaging the entire starter set.
Pulling is always made by prestressing the starter rope.

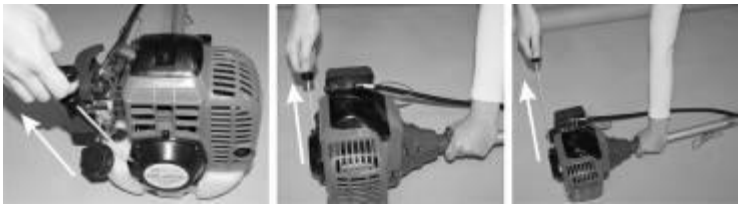

Fig. 15

2.2 Stopping the engine
Stopping the engine of the brush cutter is made as follows:

- Release the throttle lever and let the engine to run for about 2 minutes.
- Push forward the switch in the 'stop' position(STOP)

3.0 Necessary checks if the Ruris brush cutter does not answer to commands

When the engine does not start:

1. Check if the ignition is ON.
2. Check if there is enough fuel.
3. Check if there is enough petrol in the tank.
4. Check if the petrol reaches the carburetor.
5. Check if the sparkle plug gives any sparks.
6. Check if the fuel is older than 2 weeks because it risks losses of octane.

WARNING: If the Ruris brush cutter does not respond to commands or does not work properly you need to address immediately to an authorized Ruris Service.

4.0 Brush cutter operation

The Ruris brush cutters are products that allow an easy choice of the mowing mode without performing successive setting and maintenance maneuvers. The Ruris brush cutters create a unit body with the user and provide maximum and perfect comfort during operation.

In order to use the brush cutter in optimal working conditions, you will have to check before starting the mowing operation if on the mowing surface there are any objects, wooden pegs, hills, etc. objects with which the cutting disc could get in contact.

In the event that you find this kind of objects, you will have to remove them from the surface that is to be mowed. At the same time, bumps or other elements that could endanger your safety during operation will have to be highlighted using markings in those areas.

Attention! In order to be able to operate the brush cutter under safety conditions you will have to read the manual and take into account the marks that are on the brush cutter parts.
Using the brush cutter with harness is forbidden.
Make sure that before starting the operation, within a radius of at least 15 meters there are no people or animals that could get injured because at the maximum speed of the cutting head, in contact with the gravel from the ground or other objects, they could be projected outwardly.

After you have started the brush cutter and have placed it in the harness' safety lock, you can proceed to operation. For your safety avoid contact between the cutting disc and stones or hard objects.
For a correct operation you can apply various mowing methods:

1. Spiral mowing method or number 9
   - Start mowing from the most outward points of the surface, at the same time choose your mowing mode; you can cut from the right or from the left. It is advisable that you do not mow in both directions because you risk stepping on the hay mowed in the returning direction, according to fig.16

Fig. 16

2. Straight mowing method
   - Before you start mowing, set a guide mark towards which you will head. Mowing can be made by orienting the handles consecutively to the right or to the left depending on your own mowing mode.

Fig.17

3. The method of mowing on slopes or ramps
   - Avoid mowing directed to slope or ramp. In order to mow safely place yourselves perpendicularly on the axis of the slope and always lean yourself on the foot from the ramp, according to fig.18

Fig. 18

4. The mowing method used for clearing (fig. 19)
   - Clearing is always made with a perfectly chosen disc, depending on the shrubs that need to be cleared.
   - For a safe clearing you will have to always start from the edge of the mowing surface and never from inside this surface, in order to avoid possible accidents.

Fig. 19

5. The mowing method using the AutoCut mowing head
   - To use the AutoCut mowing head you must perfectly choose the type of thread for the surface that needs to be ventilated or mowed.
   - The thread that equips the AutoCut will finely mince the grass.
   - The AutoCut can be successfully used in areas with obstacles to ventilate trees, in the areas of joints with borders.

   To handle the thread you will need to operate the AutoCut by pressing it on the ground or by gently tapping it of the ground, according to fig.20

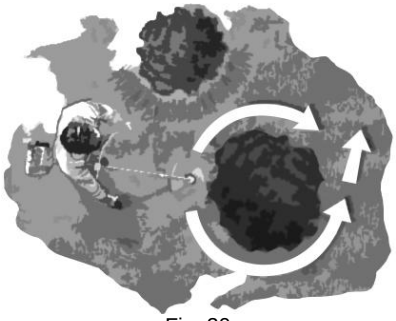

Fig. 20

This thread handling operation will be made at the maximum speed of the engine.

5.0 Types of knives

	Autocut	Cutting head with 2 threads whose length can be set depending on the cutting length that you wish to achieve.It is especially used at mowing and organization works, in places with obstacles.
	Knife with 3 teeth	Made out of steel, intended for the mowing works of rough and dry grass, on large areas.
	Knife with 4 teeth	Made out of steel, intended for removing the rough grass and thorn bushes, on large areas.

6.0 Maintenance after running-in

- To sharpen the cutting disc as well as for other works it is advisable to take your brush cutter to an authorized Ruris service.
- Some parts of the transmission work in graphite grease. It is necessary to fill in with grease and check the reduction gear. The quantity of grease from the reduction gear is enough to work for 25 hours.
- If the cutting disc does not cut properly, it can be sharpened or eventually replaced.
- Use the blade protection during transport.
- The air filter maintenance is made after each use.
- Always after running-in and in post warranty use only Ruris4T oil.
- For any problems or misunderstandings on the equipment operation mode, contact your local RURIS dealer.
- If you will not use your brush cutter for more than 2 weeks you will have to empty the petrol tank and fill it with new gas and oil specified in the user manual.

7.0 Maintenance Table

■ - user
□ - authorized service

Maintenance device and operation name		Term of execution of the maintenance operation					
Term		During running-in		After the running-in period			
Device	Operation	Every 3 hours	Before starting every work	25	50	100	At least once a year
Engine	Carburetor settings				□		
Air filter	Cleaning		■	■			
Spark plug	Cleaning, Checking	■					
	Replacing					■	■
Cooling	Cleaning		■				
Combustion space	Cleaning					□	
Carburetor	Cleaning					□	□
Oil	Replacing	■		■			
Gearing (reduction gear)	Grease change or refill			■			■
Fuel filter	Replacing		Every 25 hours				

8.0 Movement

When you wish to move the Ruris brush cutter on short or long distances, always dismount the cutting blade to avoid possible accidents or damages to it.

9.0 Packing

Packing is made in closed cardboard boxes.

Packing dimensions	length (cm)	width (cm)	height (cm)	weight (kg)
425	184	28	32+13	7,0
435	184	28	32+13	7,5

10.0 Storing

- The brush cutters should be stored in dry places, roofed and protected against moisture, in rooms with windows and adequate ventilation.
- Empty all the fuel, both from the tank and from the carburetor.
- Grease all the active metal parts with Vaseline.
- Do not store the brush cutters near inflammable areas or in front of exits.

11.0 Warnings

- The engine should be turned off when performing supply and lubrication.
- After stopping for refill, wait 15 minutes before starting again. Continuous usage is forbidden.
- People younger than 18 years old are not allowed to use this brush cutter.
- Any person that does not know and has never used the multifunctional equipment should read the user manual before working with the product.
- If you leave the brush cutter unattended, make sure that an unauthorized person does not have the possibility to start it.
- When working with the brush cutter near a wall or border, make sure that you keep a safety distance.
- Never work barefoot or in sandals. Prepare to work with resistant shoes. Before starting the work, inspect the land; remove any stones, wood, metal pieces and any foreign body.
- Before starting the engine, the user should make sure that he has a radius of minimum 15 m in front of the brush cutter, free.
- Wipe any fuel leak on the brush cutter.
- Always fill the tank with petrol when the engine is stopped and in an airy space. Do not smoke while performing this operation.
- Before starting to operate the brush cutter learn to stop the engine under safe conditions and to use the equipment correctly.
- Do not transport or clean the mowing machine with the engine running.
- Do not operate on slopes greater than 15 degrees.
- We do not accept any liability for accidents where the explanations given above have not been taken into account.
- If the engine is operated at altitudes above 1830 m above sea level, consult the Ruris authorized distributors for the engine adjustment. Even with these modifications the engine power will decrease with approximately 3,5 %.

DECLARATIONS OF CONFORMITY

CE

Declaration of conformity EC nr. 2013/98

The manufacturer:

Name **S.C. Ruris Impex S.R.L.**

Address: Calea Severinului, bl. 317b, Craiova, Romania

Declare under his sole responsibility that the product:

Name: **Brushcutter**

Model: **425**

Measured sound power level for this equipment L_{WA} is 86 dB(A),

guaranteed sound power level for this equipment L_{WA} is 86 dB(A),

meet the following essential requirements:

- Machinery Directive **2006/42/EC**
- Noise Emission in the Environment Directive **2000/14/EC**

And that the following harmonized standards have been applied:

SR EN ISO 11806/2004, SR EN ISO 61000-6-1/2004, SR EN ISO 55012, 10 884,

SR EN ISO 12733/2002/AC/2004, SR EN ISO 12100-2/2004; Directive 98/37/EC- Annex 1,

SR guide ISO/CEI 67

The notified body involved to the conformity assessment procedures:

Name: I.N.M.A. – National Institute of Research-Development for Machinery and Installations in Agriculture and Food Industry

Address: 71592, Blvd. Ion Ionescu de la Brad, nr. 6, sector 1, Bucharest, Romania

Identification number: **12.01.028**

Declaration of conformity loses its validity in the event of alteration or modification of the product.
The technical documentation located at the headquarter of the RURIS IMPEX S.R.L. company.

Craiova, 10 January 2013
place, date

Company President
Eng. Stroe Marius Catalin

CE

Declaration of conformity EC nr. 2013/98

The manufacturer:

Name **S.C. Ruris Impex S.R.L.**

Address: Calea Severinului, bl. 317b, Craiova, Romania

Declare under his sole responsibility that the product:

Name: **Brushcutter**

Model: **435**

Measured sound power level for this equipment L_{WA} is 96 dB(A),

guaranteed sound power level for this equipment L_{WA} is 96 dB(A),

meet the following essential requirements:

- Machinery Directive **2006/42/EC**
- Noise Emission in the Environment Directive **2000/14/EC**

And that the following harmonized standards have been applied:

SR EN ISO 11806/2004, SR EN ISO 61000-6-1/2004, SR EN ISO 55012, 10 884,

SR EN ISO 12733/2002/AC/2004, SR EN ISO 12100-2/2004; Directive 98/37/EC- Annex 1,

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Craiova, 10 January 2013
place, date

Company President
Eng. Stroe Marius Catalin